Amendments to the Specification

Please replace the paragraph beginning on page 12, line 10, with the following rewritten paragraph.

As shown in Fig. 2, pinned portion 28 may include ~~including~~ layers 54-60. More specifically, pinned portion 28 may include antiferromagnetic (AF) layer 54, magnetic layer 56, coupling layer 58, and magnetic layer 60. In some embodiments, pinned portion 28 may further include a contact layer interposed between AF layer 54 and electrode 24 to enhance the electrical connection between the subsequently formed magnetic cell junction and the electrode. Such an additional contact layer may include any conductive material, such as aluminum, cobalt, copper, iron, nickel, nickel-iron-chromium, platinum, tantalum, titanium, tungsten, or a metal alloy thereof. In some embodiments, the additional contact layer may further include a seed material formed above the conductive material. In some cases, the seed material may serve to align the crystalline structure of AF layer 54. Consequently, in some embodiments, the seed layer material may include a material used in the microelectronics industry for aligning the crystalline structures layers with AF materials, such as nickel-iron materials or more specifically, permalloy. Other materials used for aligning the crystalline structure of AF materials, however, may be used for the seed layer material, depending on the design specifications of the magnetic cell junction. In any case, the additional contact layer within pinned portion 28 may include a thickness between approximately 100 angstroms and approximately 1000 angstroms. However, larger and smaller thickness of the additional contact layer may be appropriate depending on the design specifications of the magnetic cell junction. In yet other embodiments, pinned portion 28 may not include such an additional contact layer.

Please replace the paragraph beginning on page 21, line 15, with the following rewritten paragraph.

Fig. 6 illustrates ~~the~~ patterning layers 54, 56, 58, 60, 27, and 70 to form magnetic cell junctions 72 and 74. In general, such an etch process may be adapted to substantially terminate upon exposure of dielectric layer 30. In particular, the etch process may include wet or dry etch techniques known in the MRAM fabrication industry. In some embodiments, a high density plasma may be preferred for such an etch process. In any case, the previous introduction of dopants within microelectronic topography 20 as discussed above in reference to Fig. 5 preferably does not extend to layers underlying tunneling barrier layer 27. As such, any layers underlying tunneling barrier layer 27 are still considered "active" (i.e., the underlying layers still maintain their properties for setting a pinned magnetic direction). Consequently, the patterning process described in reference to Fig. 6 may be used to define the lateral boundaries of the pinned portions within magnetic cell junctions 72 and 74.